

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P544885

Luminaire Tested: **FMR-12-1-LD4-1STD-35-UNV-93-96-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P544885  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/15/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-12-1-LD4-1STD-35-UNV-93-96-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

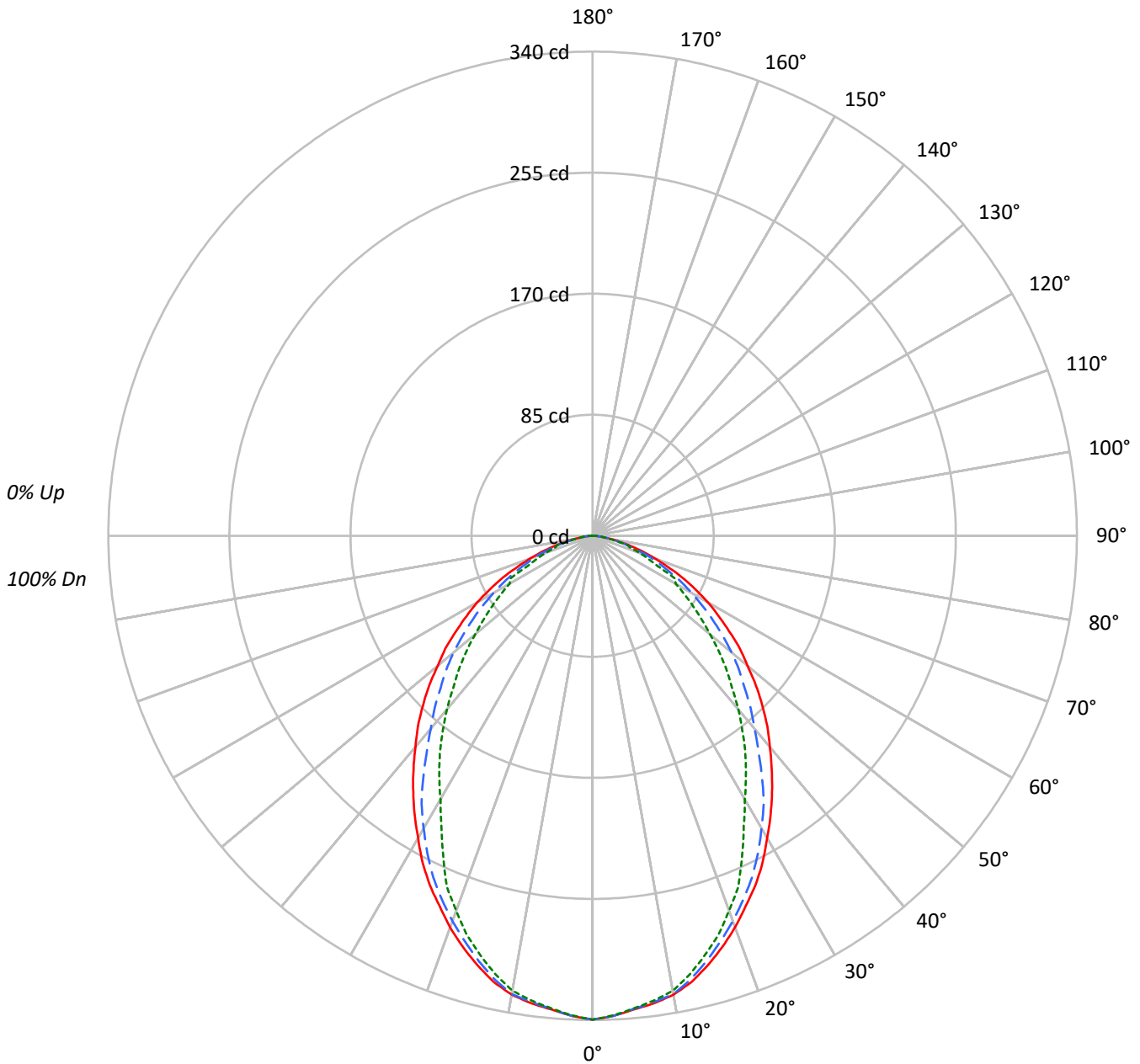
Lumens per Lamp: N/A  
Luminaire Lumens: 667.0 lumens  
Efficiency: N/A  
Efficacy: 80.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3658	3658	3658
5°	3608	3603	3599
10°	3576	3572	3546
15°	3480	3444	3397
20°	3352	3298	3208
25°	3214	3144	2948
30°	3046	2948	2656
35°	2886	2725	2457
40°	2720	2484	2236
45°	2565	2296	2022
50°	2375	2132	1802
55°	2198	1931	1614
60°	2013	1724	1447
65°	1770	1510	1281
70°	1457	1322	1089
75°	1160	1015	1061
80°	781	731	682
85°	482	580	679



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.6	4.7
10°-20°	86.8	13.0
20°-30°	120.2	18.0
30°-40°	128.1	19.2
40°-50°	116.9	17.5
50°-60°	91.6	13.7
60°-70°	59.7	8.9
70°-80°	26.4	4.0
80°-90°	5.7	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	238.6	35.8
0°-40°	366.7	55.0
0°-60°	575.2	86.2
0°-90°	667.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	667.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	340	340	340	340	340	
5°	334	334	334	333	333	32
15°	312	312	309	306	305	88
25°	271	269	265	255	248	124
35°	220	218	207	192	187	137
45°	168	165	151	138	133	130
55°	117	114	103	91	86	105
65°	70	66	59	60	50	69
75°	28	26	24	23	26	30
85°	4	4	5	5	6	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	339.8	339.8	339.8	339.8	339.8
2.5°	337.4	337.4	337.4	337.0	337.0
5°	333.9	333.5	333.5	333.1	333.1
7.5°	331.1	330.7	330.3	329.9	329.2
10°	327.2	327.2	326.8	324.8	324.4
12.5°	320.9	320.5	318.9	316.2	315.4
15°	312.3	312.3	309.1	306.0	304.8
17.5°	302.8	302.4	298.5	295.4	293.8
20°	292.6	291.8	287.9	282.8	280.1
22.5°	281.2	281.2	276.5	269.8	267.1
25°	270.6	269.1	264.7	255.3	248.2
27.5°	258.5	256.1	251.4	238.0	229.8
30°	245.1	243.9	237.2	220.0	213.7
32.5°	232.5	230.6	223.5	205.4	200.3
35°	219.6	218.0	207.4	191.7	187.0
37.5°	206.6	204.6	191.3	178.7	172.8
40°	193.6	191.3	176.8	165.4	159.1
42.5°	181.5	178.3	164.2	152.0	144.9
45°	168.5	165.0	150.8	138.3	132.8
47.5°	155.5	152.4	139.4	126.5	120.2
50°	141.8	139.0	127.3	114.3	107.6
52.5°	130.4	126.1	114.7	101.7	96.2
55°	117.1	113.5	102.9	90.7	86.0
57.5°	104.9	101.3	91.5	80.1	76.2
60°	93.5	88.4	80.1	70.3	67.2
62.5°	80.9	77.0	69.9	61.7	65.6
65°	69.5	65.6	59.3	60.5	50.3
67.5°	57.0	55.0	49.5	44.0	42.4
70°	46.3	44.0	42.0	36.1	34.6
72.5°	36.9	34.6	31.8	28.7	27.5
75°	27.9	25.9	24.4	23.2	25.5
77.5°	19.2	18.5	17.3	16.1	15.7
80°	12.6	12.2	11.8	11.4	11.0
82.5°	7.5	7.5	7.5	7.5	7.5
85°	3.9	4.3	4.7	5.1	5.5
87.5°	2.4	2.4	2.7	3.1	3.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)